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ABSTRACT

The present study was a psychometric evaluation of two recently revised Jungian personality instruments, the Singer-Loomis Type Deployment Inventory (SL-TDI) and the Personal Preferences Self-Description Questionnaire (PPSDQ). The study also examined the relationship between Jungian personality dimensions and the Five-Factor Model of personality (neuroticism, extraversion, agreeableness, openness to experience, and conscientiousness), using the NEO Five-Factor Inventory (NEO-FFI). These three instruments and a demographic questionnaire were administered to 305 college undergraduates. Alpha coefficients indicated very good reliability of scores from the SL-TDI and the PPSDQ. Bivariate and canonical correlations between the two Jungian personality instruments and predicted scales on the NEO-FFI provided support for the construct validity of scores from both Jungian personality instruments. (Contains 1 figure, 3 tables, and 23 references.) (Author/SLD)

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Measurement of Jungian Personality Types

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Measurement of the Jungian Personality Constructs

Abstract

The present study was a psychometric evaluation of two recently revised Jungian personality instruments, the Singer-Loomis Type Deployment Inventory (SL-TDI) and the Personal Preferences Self-Description Questionnaire (PPSDQ). The present study also examined the relationship between Jungian personality dimensions and the Five-Factor Model of personality (Neuroticism, Extraversion, Agreeableness, Openness to Experience, and Conscientiousness), using the NEO Five-Factor Inventory (NEO-FFI). These three instruments and a demographics questionnaire were administered to 305 college undergraduates. Alpha coefficients indicated very good reliability of scores from the SL-TDI and the PPSDQ. Bivariate and canonical correlations between the two Jungian personality instruments and predicted scales on the NEO-FFI provided support for the construct validity of scores from both Jungian personality instruments.

Measurement of the Jungian Personality Constructs

Jung's (1971) personality theory posits that people differ in the degree to which they are more oriented to the outer world of events and others or more toward the inner self. The two different orientations, or "attitudes," are called Extraversion and Introversion. The theory also posits the existence of "functions" involving preferences between two modes of perception (Sensing versus Intuition) and two modes of judgment (Thinking versus Feeling).

One may perceive through the mode of Sensing, which is objective perception through the use of the senses. Conversely, one may also perceive through the use of Intuition, which emphasizes the general patterns underlying perceptions. Sometimes knowledge gained through the use of Intuition may seem foreign, in that one does not know exactly how the information was derived, as is the case with a "hunch".

Once something has been perceived, there are two modalities for making judgments about those perceptions. When the Thinking mode is used, judgments are made based on an objective and rational approach. An example would be the logical analysis of cause and effect. On the other hand, judgments originating within the Feeling mode are made based on desirability, degree of importance, and subjective values.

Jungian theory asserts that the extent to which an individual prefers certain attitudes and functions as against other attitudes and functions reflects that individual's personality. The most

popular instrument (Thompson & Ackerman, 1994) for the measurement of Jungian personality is the Myers-Briggs Type Indicator (MBTI; Myers, 1975). That measure is widely used in various counseling situations, including career and marital counseling, among other applications.

MBTI questions are presented in a forced-choice format such that the test-taker must choose between two responses, each of which are indicative of opposing attitudes or functions. In other words, if a question assesses the perception functions (Sensing versus Intuition), the respondent can only choose either a response indicative of Sensing, or one indicative of Intuition. The number of responses in favor of one attitude or function over the other is compared, and the respondent's preference on a given attitude/function dimension (e.g., Extraversion versus Introversion) is defined by the attitude or function within a bi-polar pair with the higher number of endorsements.

One of the criticisms of the MBTI is the assumption that the opposing attitudes and functions are dichotomous variables (see Cowan, 1989; Garden, 1991; Girelli & Stake, 1993; Loomis & Singer, 1980). This bipolarity assumption is the rationale for the forced choice format and scoring used to classify individuals into distinct types. However, a contrasting theory is that the attitudes and functions are actually continuous traits. This would lead to the possibility that one could become highly developed on any or all the attitudes and functions. For example, one may be highly developed on both judging functions (Thinking and Feeling), or conversely, be only slightly developed on both Judging

functions.

The present study was a psychometric evaluation the Singer-Loomis Type Deployment Inventory (SL-TDI; Singer, Loomis, Kirkhart, & Kirkhart, 1996a, 1996b) and the Personal Preferences Self-Description Questionnaire (PPSDQ; Thompson, 1996). Both of these Jungian personality instruments utilize a continuous, non-forced choice response format, which may be more useful in measuring Jungian personality constructs. Both the reliability and construct validity of data form these instruments were examined.

One method of evaluating construct validity of data from these instruments was a comparison with related personality factors from the "Big Five" five-factor model of personality. Past research comparing the MBTI with the factors from the five-factor model of personality has demonstrated interesting relationships between certain Jungian personality variables and the five-factor model of personality. For example, McCrae and Costa (1989) examined the relationship between scores on the MBTI and the NEO Personality Inventory (NEO-PI; Costa & McCrae, 1985). Extraversion measured by the MBTI was found to be highly related to the NEO-PI Extraversion scale ($\underline{r}$'s = .74 and .69 for men and women, respectively).

Other interesting correlations were also found. Since the correlations were very similar for men and women, only those for the males are listed here. MBTI Intuition was found to be related to NEO-PI Openness to Experience ($\underline{r}$ = .72), while MBTI Feeling was related to Agreeableness ($\underline{r}$ = .44). MBTI Perceiving was related to Openness to Experience ($\underline{r}$ = .30) and negatively related to Conscientiousness ($\underline{r}$ = -.49). All of these correlations, except

for that of the Judging-Perceiving scale and Openness to Experience, were also statistically significant when the NEO-PI scores came from peer ratings (although the r's were somewhat smaller).

Results consistent with those of McCrae and Costa (1989) were subsequently reported by MacDonald, Anderson, Tsagarakis, and Holland (1994). Given these relationships between the MBTI and the five-factor model, it was hypothesized in the present study that construct validity of SL-TDI and PPSDQ scores would be demonstrated through their relationships with the five-factor model. Figure 1 graphically depicts these hypotheses.

INSERT FIGURE 1 ABOUT HERE

In the present study it was hypothesized that the reliability of SL-TDI and PPSDQ scale scores would be demonstrated through high internal consistency, using coefficient alpha. It was also hypothesized that the construct validity of scores from the two instruments would be demonstrated in the following ways: (1) statistically significant and noteworthy bivariate correlations between the Jungian scales and the five-factor model dimensions such as those discussed previously and depicted in Figure 1; (2) noteworthy zero-order correlations between like scales of the two Jungian instruments (SL-TDI and PPSDQ); (3) statistically significant and noteworthy multivariate relationships between the two Jungian instruments (SL-TDI and PPSDQ); and (4) noteworthy variance accounted for in the two Jungian personality instruments (SL-TDI and PPSDQ) in a canonical correlation analysis predicting

scores from the five-factor model (NEO-FFI).

Method

Participants

The sample consisted of 305 college students (40% male, 60% female) who were predominantly freshmen (63%) and sophomores (21%) with a mean age of 19 (SD = 1.69). The majority of the participants were Caucasian (82%). The following were the most frequently endorsed major areas of study: Business (22%), General Studies (16%), Engineering (14%), Science (13%), and Liberal Arts (12%).

Instruments

Participants completed a package containing the following instruments: a one-page demographics questionnaire, the SL-TDI (Singer et al., 1996a), the PPSDQ (Thompson, 1996), and the NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1991), which was used to operationalize the five-factor model.

Singer-Loomis Type Deployment Inventory. The SL-TDI (Singer et al., 1996a) is a recent revision of a Jungian personality instrument originally known as the Singer-Loomis Inventory of Personality (Singer & Loomis, 1984). This instrument was developed as an alternative to the measurement format used by the MBTI. The structure is based upon the proposition that the personality variables are independent and continuous, and thus the response format of the instrument is continuous and non-forced choice. Another assumption underlying the structure of the SL-TDI (unlike the structure of either the MBTI or the PPSDQ) is that the attitudes are not entities separate from the functions, but that

one uses functions in either an introverted or extraverted manner.

The SL-TDI consists of 20 different hypothetical situations, each followed by a list of eight possible reactions to the situation. Each reaction corresponds to a combination of an introverted or extraverted orientation with each of the four functions (e.g., Extraverted Thinking, Introverted Thinking). The respondent indicates on a five-point Likert scale how often he or she would make that response (1 = never, 5 = always).

Personal Preferences Self-Description Questionnaire. The PPSDQ (Thompson, 1996) is an instrument for the measurement of Jungian personality (cf. Kier, Melancon & Thompson, in press). The PPSDQ has been employed in an iterative sequence of item development and revision studies across a series of samples (cf. Melancon & Thompson, 1996; Thompson & Melancon, 1995, 1996; Thompson & Stone, 1994).

The instrument consists of 55 scored word-pair items and 38 scored sentence items which are posited to mark each of the four psychological types. Each word pair is presented as a semantic differential scale, in which a seven-point Likert scale is presented between each pair of words, and participants chose the number that represents which word best describes them. The sentence items also invoke a seven-point Likert scale response format, in which participants rate the degree to which they agree or disagree with each statement.

NEO Five-Factor Inventory. The NEO-FFI (Costa & McCrae, 1991) is an instrument for the measurement of the "Big Five" factors of personality described by the five-factor model: Neuroticism,

Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. The instrument is a short version of the revised NEO Personality Inventory, and consists of 60 sentence items which are posited to be indicative of each of the five personality factors. Respondents indicate the degree to which they agree or disagree with each of the statements using a five-point Likert scale. The manual reports internal consistency of data from the scales ranging from .68 to .86, while correlations of the scales with scores on the full-length version range from .77 to .92.

Results

Reliability

Internal consistencies of data from the PPSDQ and SL-TDI scales were calculated using Cronbach's alpha. Table 1 presents the internal consistency coefficient of scores on each of the scales from the two instruments. Internal consistency coefficients on the PPSDQ ranged from .83 to .90. For the SL-TDI, internal consistency for scores on each of the eight smaller scales measuring the functions used in extraverted and introverted orientations ranged from .64 to .75. Internal consistency of data from the four larger functions scales ranged form .79 to .85, while the coefficients for the two scales at the highest level of aggregation (Extraversion and Introversion) were both .90.

INSERT TABLE 1 ABOUT HERE

Bivariate Validity Coefficients

Construct validity of data from the SL-TDI was first assessed

through examination of bivariate relationships with the NEO-FFI. Five of the six predicted relationships between SL-TDI and NEO-FFI scales (see Figure 1) were statistically significant ($p < .05$): SL-TDI Extraversion and NEO-FFI Extraversion ($r = .36$), SL-TDI Introversion and NEO-FFI Neuroticism ($r = .31$), SL-TDI Thinking and NEO-FFI Conscientiousness ($r = .31$), SL-TDI Intuition and NEO-FFI Neuroticism ($r = .31$), and SL-TDI Feeling and NEO-FFI Agreeableness ($r = .14$). The predicted relationship between SL-TDI Intuition and NEO-FFI Openness to Experience was not found ($r = .07$; $p > .05$).

Construct validity of data from the PPSDQ was also assessed in part through examination of bivariate relationships with the NEO-FFI. The scales of the PPSDQ are keyed such that higher scores indicate more of the variable to the right in the name of the scale, while lower scores indicate more of the variable to the left in the name of the scale. For example, a positive correlation with the Thinking/Feeling scale would indicate a relationship with Feeling, while a negative correlation with the same scale would indicate a relationship with Thinking.

Seven of the eight predicted relationships between PPSDQ and NEO-FFI scales (see Figure 1) were statistically significant ($p < .05$): PPSDQ Extraversion/Introversion and NEO-FFI Extraversion ($r = -.77$), PPSDQ Judging/Perceiving and NEO-FFI Conscientiousness ($r = -.62$), PPSDQ Sensing/Intuition and NEO-FFI Openness to Experience ($r = .60$), PPSDQ Thinking/Feeling and NEO-FFI Agreeableness ($r = .52$), PPSDQ Judging/Perceiving and NEO-FFI Openness to Experience ($r = .26$), PPSDQ Extraversion/Introversion and NEO-FFI Neuroticism ($r = .24$), and PPSDQ Sensing/Intuition and NEO-FFI Neuroticism (r

= .17). The predicted relationship between PPSDQ Thinking/Feeling and NEO-FFI Conscientiousness was not found (r = -.01; p > .05).

Concurrent validity of both PPSDQ and SL-TDI scores was assessed through examination of relationships between like scales of the two instruments. All of the following relationships were predicted and statistically significant (p < .05): PPSDQ Thinking/Feeling and SL-TDI Feeling (r = .34), PPSDQ Extraversion/Introversion and SL-TDI Extraversion (r = -.28), PPSDQ Sensing/Intuition and SL-TDI Intuition (r = .13). There was essentially no linear relationship between the two Introversion scales (r = .01; p > .05). The following scales were related in the direction opposite from prediction: PPSDQ Thinking/Feeling and SL-TDI Thinking (r = -.13), PPSDQ Sensing/Intuition and SL-TDI Sensation (r = .12); however, these coefficients can more appropriately be interpreted as involving almost no linear relationship, since common variance was less than 2% (e.g., $-.13^2$ = 1.7%).

Multivariate Validity Analyses

Table 2 presents the results of the canonical correlation analysis (Thompson, 1991) between SL-TDI and PPSDQ scores. In the present context, these results are multivariate concurrent validity coefficients (Thompson, in press). Multivariate analyses can be useful in controlling the inflation of experimentwise Type I error rates and honoring within the analysis the reality that variables exist and covary simultaneously (Thompson, 1991, in press).

INSERT TABLE 2 ABOUT HERE

The first function accounted for 31% of the variance ($R_c^2 = .56^2 = .31$). The following were the SL-TDI variables noteworthy in the first function, along with the standardized function coefficient (SFC) and structure coefficient (r_s) of each variable: Thinking (SFC = 1.30, $r_s = .85$), Feeling (SFC = .29, $r_s = .52$), Sensation (SFC = -.20, $r_s = .45$), and Intuition (SFC = -.72, $r_s = .22$). The following PPSDQ variables were noteworthy in the function: Judging/Perceiving (SFC = -1.14, $r_s = -.86$), Extraversion/Introversion (SFC = -.34, $r_s = -.28$), and Sensing/Intuition (SFC = .40, $r_s = -.20$).

The second canonical function accounted for 18% of the variance ($R_c^2 = .42^2 = .18$). The following SL-TDI variables were noteworthy in the function: Feeling (SFC = -1.53, $r_s = -.74$), Intuition (SFC = -.12, $r_s = -.41$), Sensation (SFC = .50, $r_s = -.11$), and Thinking (SFC = .69, $r_s = -.10$). The following PPSDQ variables were noteworthy in the second function: Thinking/Feeling (SFC = -.71, $r_s = -.86$), Introversion/Extraversion (SFC = .48, $r_s = .71$), and Judging/Perceiving (SFC = -.30, $r_s = -.25$).

Canonical correlation analysis was also used to predict Jungian personality scores from the Five-Factor model. Table 3 presents the results of the canonical correlation between the SL-TDI and PPSDQ variables with the NEO-FFI variables. The first canonical function accounted for 64% of the variance ($R_c^2 = .80^2 = .64$). This function was made up almost completely by the Extraversion/Introversion scale of the PPSDQ (SFC = .85, $r_s = .96$),

and the Extraversion scale of the NEO-FFI (SFC = .99, r_s = .99).

INSERT TABLE 3 ABOUT HERE

The second canonical function accounted for 58% of the variance ($R_c^2 = .76^2 = .58$). The following Jungian variables were noteworthy in the second equation: PPSDQ Judging/Perceiving (SFC = -.74, r_s = -.85), SL-TDI Thinking (SFC = .12, r_s = .44), PPSDQ Thinking/Feeling (SFC = .50, r_s = .42), and SL-TDI Feeling (SFC = .00, r_s = .34). The following Five-Factor model variables were noteworthy in the second equation: Conscientiousness (SFC = .64, r_s = .70), Agreeableness (SFC = .48, r_s = .57), Openness to Experience (SFC = -.27, r_s = -.41), and Neuroticism (SFC = .48, r_s = .35).

The third canonical correlation accounted for 42% of the variance ($R_c^2 = .65^2 = .42$). The following Jungian variables were noteworthy in the function: PPSDQ Sensing/Intuition (SFC = -1.00, r_s = -.45), SL-TDI Sensation (SFC = -.47, r_s = -.45), PPSDQ Thinking/Feeling (SFC = -.35, r_s = -.32), SL-TDI Thinking (SFC = .01, r_s = -.31), SL-TDI Intuition (SFC = .30, r_s = -.23), PPSDQ Extraversion/Introversion (SFC = -.41, r_s = -.16), and PPSDQ Judging/Perceiving (SFC = .49, r_s = -.01). The primary Five-Factor model variable in this function was Openness to Experience (SFC = -.97, r_s = -.91).

Discussion

PPSDQ scores were found to be highly reliable, as evidenced by high internal consistency using Cronbach's alpha, as reported in Table 1. Data from the SL-TDI also had very good to excellent

reliability. For the shorter scales measuring the use of functions with a specific attitude, which are combined to yield the overall function and attitude scores, the scores were somewhat less reliable. However, reliability is a function of score variance, which itself can be partially a function of the number of items. Therefore, it might be expected that the reliability of these scale scores would be lower, since they contain fewer items. The reliability of scores from these scales were, nevertheless, acceptable. It is also noteworthy that the larger, combined attitude and function scores are probably more important for interpretive purposes than the shorter scales.

One method of assessing the construct validity of PPSDQ and SL-TDI scores was examination of the bivariate and multivariate relationships between scores on the two instruments, since both purportedly measure Jungian personality. This analysis yielded mixed results. Most of the bivariate correlations between like scales of the two instruments were small, with the exception of the two Extraversion and Feeling scales, which had a moderate correlation ($\underline{r}$ = .34) across the two instruments. Furthermore, there was only a moderate correlation between the two instruments as a whole, as demonstrated by canonical correlation analysis reported in Table 2. The largest canonical correlation indicated only about 32% shared variance between the two instruments.

Speculation regarding why these two instruments were not more highly related appears warranted. First, one might expect the correlations to be somewhat attenuated due to the differences in response formats. While the PPSDQ measures the opposing attitudes

and functions as bipolar ends of a continuum, the SL-TDI measures the traits independently. Therefore, preferences measured by the SL-TDI may not appear as strong as those measured by the PPSDQ.

The specific theoretical assumptions underlying the two instruments is also another major difference. Although both instruments are based on Jungian personality theory, the two instruments have different conceptualizations of how the types are manifested. The SL-TDI departs from traditional conceptualizations in that the attitudes (Introversion and Extraversion) are not thought of as traits. Instead, they are thought of as inseparable from the functions (e.g., Sensing, Intuition). In other words, from the SL-TDI perspective the functions can be used in an introverted manner or extraverted manner, thus leading actually to eight functions (2 attitudes X 4 functions). These functions, called Type Modes in SL-TDI terminology, are the basic traits purportedly measured by the instrument (Singer, Loomis, Kirkhart, & Kirkhart, 1996b).

This differs from the PPSDQ, and from the MBTI, in which the preferences for both attitudes and functions are directly and independently measured traits. Such preferences for the overall attitudes and functions are not directly measured by the SL-TDI, but rather are inferred by combining scores from different scales. For instance, preference for an overall attitude is assessed by combining scores from all the scales involving the use of functions with the attitude is question (e.g., Introversion = Introverted Sensation + Introverted Intuition + Introverted Thinking + Introverted Feeling).

From this conceptual analysis, it seems that what is being measured by the PPSDQ and the SL-TDI may be more different than originally expected, which would help explain the lower correlations between like scales. One additional factor could also be the attenuation in correlations which occurs in any analysis involving two instruments where scores do not posses perfect reliability.

The relationship between the Jungian instruments and the Five-Factor Model was also investigated. Good construct validity of data from both the PPSDQ and the SL-TDI was demonstrated by generally isolating the predicted relationships between scales from these instruments and similar constructs form the Five-Factor model, as reported in previous narrative detailing bivariate relationships and in the Table 3 report of the multivariate analysis. A few notable comparisons and contrasts can be made.

Scales from both instruments were related to most of the scales of the NEO-FFI to which they were predicted to be related. However, several of the relationships of the SL-TDI with the NEO-FFI were not as strong as the same relationships found between the PPSDQ and the NEO-FFI. This was especially true of the relationship between the Extraversion scales. For the NEO-FFI and the SL-TDI this correlation was .36, while for the NEO-FFI and the PPSDQ this correlation was also in the expected direction (given scoring direction on the PPSDQ), but was -.77.

Similarly, as reported in Table 3, the NEO-FFI and the PPSDQ Extraversion scales dominated the largest canonical function. These patterns are particularly important, because the Introversion/

Extraversion "attitude" is the major Jungian construct, which in theory affects which "functions" people tend to exhibit to others. For example, Extraverts with preferences for the iNtuition and Thinking functions and for Judging will tend to "show the world" their "dominant" (i.e., most preferred) function: Thinking. But Introverts with preferences for the iNtuition and Thinking functions and for Judging will tend to most "show the world" the use of the Thinking function, but have iNtuition as their "dominant" function.

On some scales SL-TDI and NEO-FFI scores were more correlated than were PPSDQ and NEO-FFI scales. For example, the relationship between the Sensing/Intuition scale of the PPSDQ and NEO-FFI Neuroticism (r = .17) was much smaller than that of the SL-TDI Intuition scale and NEO-FFI Neuroticism (r = .31). However, the PPSDQ Sensing/Intuition scale may simply be a purer measure of variations within normal personalities. And in any case, overall the relationships between PPSDQ and NEO-FFI scales tended to be larger than those between the SL-TDI and NEO-FFI scales.

It is interesting that the two instruments differed in which of the hypothesized relationships with the NEO-FFI were not found. The predicted relationship between Intuition and Openness to Experience was not found with the SL-TDI (r = .07), while these two scales had a strong relationship using the PPSDQ (r = .60). On the other hand, the predicted relationship between Thinking and Conscientiousness was not found with the PPSDQ (r = -.01), but was found with the SL-TDI (r = .31). This relationship found with the SL-TDI was also considerably higher than that found by McCrae and

Costa (1989), using the MBTI and the NEO-PI.

In summary, we tested specific expectations derived from previous research and did so using both bivariate and multivariate perspectives. The evidence suggests that both the measures of Jungian constructs yielded reasonably reliable scores. Of course, this conclusion warrants further replication in future "reliability generalization" studies (see Vacha-Haase, in press). The evidence also suggests that both the SL-TDI and the PPSDQ yielded scores that were reasonably valid.

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Figure 1
Hypothesized Positive Noteworthy Relationships
Between Jungian and Five-Factor Constructs

	Big-Five Scales				
Jungian Scales	Neurotic	Extraversion	Openness	Agreeableness	Conscientiousness
Introversion	+				
Extraversion		+			
Thinking					+
Feeling				+	
Sensing					
Intuition	+		+		
Judging					+
Perceiving			+		

Note. The PPSDQ measures the eight scales noted above, while the SL-TDI does not have Judging or Perceiving scales. Thus, six noteworthy bivariate relationships were predicted for the SL-TDI, while eight noteworthy bivariate relationships were predicted for the PPSDQ.

Table 1
Internal Consistency Coefficients for SL-TDI and PPSDQ Scores

Measure/Scale	α
SL-TDI	
Lowest Aggregation Level	
Introverted Thinking	.74
Extraverted Thinking	.74
Introverted Feeling	.64
Extraverted Feeling	.75
Introverted Sensation	.67
Extraverted Sensation	.67
Introverted Intuition	.74
Extraverted Intuition	.70
Middle Aggregation Level	
Thinking	.85
Feeling	.79
Sensation	.80
Intuition	.84
Highest Aggregation Level	
Introversion	.90
Extraversion	.90
PPSDQ	
Introversion/Extraversion	.90
Thinking/Feeling	.83
Sensation/Intuition	.83
Judging/Perceiving	.89

Note. SL-TDI items are aggregated at three levels; at the highest level, there are only two scores, both of which involve more items than scores aggregated at either of the two lower levels.

Table 2
Multivariate Canonical Correlation Concurrent Validity Coefficients for the SL-TDI and the PPSDQ

Measure/ Variable	Function I			Function II			Function III			
	SFC	r_s	r_s^2	SFC	r_s	r_s^2	SFC	r_s	r_s^2	h^2
SL-TDI										
Sensation	-.202	.454	20.61%	.499	-.212	4.49%	1.326	.865	74.82%	99.93%
Intuition	-.724	.217	4.71%	-.119	-.408	16.65%	.419	.721	51.98%	73.34%
Thinking	1.296	.850	72.25%	.694	-.099	.98%	-.481	.444	19.71%	92.94%
Feeling	.285	.518	26.83%	-1.527	-.737	54.32%	-.548	.428	18.32%	99.47%
Adequacy			31.10%			19.11%			41.21%	
Rd			9.83%			3.36%			2.76%	
Rc^2			31.60%			17.60%			6.70%	
Rd			6.91%			5.82%			1.32%	
Adequacy			21.88%			33.04%			19.64%	
EI	-.335	-.283	8.01%	.483	.714	50.98%	.589	.269	7.24%	66.22%
SN	.404	-.195	3.80%	.265	-.107	1.14%	.995	.732	53.58%	58.53%
TF	.003	.103	1.06%	-.708	-.859	73.79%	.471	.380	14.44%	89.29%
JP	-1.139	-.864	74.65%	-.303	-.250	6.25%	-.362	.182	3.31%	84.21%
PPSDQ										

Note. The table is formatted in conjunction with the recommendations of Thompson (1991). "EI" = Extraversion/Introversion; "SN" = Sensing/iNtuition; "TF" = Thinking/Feeling; "JP" = Judging/Perceiving.

Table 3
Multivariate Construct Validity Analysis
Relating SL-TDI and PPSDQ Scores with NEO-FFI Scores

Measure/ Variable	Function I			Function II			Function III			h^2
	SFC	r_s	r_s^2	SFC	r_s	r_s^2	SFC	r_s	r_s^2	
NEO-FFI										
Neuroticism	.069	.243	5.90%	.476	.351	12.32%	-.243	-.095	.90%	19.13%
Extraversion	-.985	-.985	97.02%	.037	.137	1.88%	.014	-.024	.06%	98.96%
Openness	-.005	-.023	.05%	-.272	-.406	16.48%	-.974	-.912	83.17%	99.71%
Agreeableness	-.014	-.250	6.25%	.483	.566	32.04%	-.254	-.222	4.93%	43.21%
Conscientiousness	.168	.055	.30%	.639	.695	48.30%	-.240	-.148	2.19%	50.80%
Adequacy			21.91%			22.20%			18.25%	
Rd			14.17%			12.94%			7.67%	
Rc^2			64.70%			58.30%			42.00%	
Rd			13.03%			12.05%			5.35%	
Adequacy			20.14%			20.67%			12.73%	
SL-Sensation	-.047	-.166	2.76%	-.176	.236	5.57%	-.467	-.445	19.80%	28.13%
SL-Intuition	.045	-.203	4.12%	.178	.218	4.75%	.293	-.232	5.38%	14.26%
SL-Thinking	.077	-.146	2.13%	.122	.444	19.71%	.008	-.309	9.55%	31.39%
SL-Feeling	-.169	-.388	15.05%	-.004	.344	11.83%	.024	-.239	5.71%	32.60%
PPSDQ-EI	.847	.963	92.74%	.008	-.053	.28%	-.414	-.156	2.43%	95.45%
PPSDQ-SN	-.079	-.339	11.49%	-.206	-.573	32.83%	-1.001	-.698	48.72%	93.05%
PPSDQ-TF	-.152	-.513	26.32%	.476	.418	17.47%	-.345	-.320	10.24%	54.03%
PPSDQ-JP	-.103	-.255	6.50%	-.741	-.854	72.93%	.489	-.012	.01%	79.45%
SL-TDI and PPSDQ										

Note. The table is formatted in conjunction with the recommendations of Thompson (1991). "EI" = Extraversion/Introversion; "SN" = Sensing/iNtuition; "TF" = Thinking/Feeling; "JP" = Judging/Perceiving.

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